

STATUS OF CLAIMS

Claims 2-46 are pending.

Claims 2-46 stand rejected.

REMARKS

Claims 2-3 and 5-46 stand rejected under U.S.C. § 103(a) as being unpatentable over Comstock in view of Schneider et al. (U.S. Patent No. 6,539,418). Claim 4 stands rejected under U.S.C. § 102(e) as being anticipated by Comstock (U.S. Patent Application Publication No. 2004/0083266). Applicant requests reconsideration and removal of these rejections for at least the following reasons.

1. Claims 2-3 and 5-46

As set forth above, Claims 2-3 and 5-46 stand rejected as being unpatentable over Comstock in view of Schneider et al. The official action states:

As to claim 2, Comstock teaches the invention as claimed, including a system for improved video digitization and image correction, said system comprising:
a plurality of workstations coupled to a communications medium (figures 1-2);
a remote management unit coupled to said communications medium, said remote management unit including a digitizer converting analog video signals received from at least one of a plurality of remote networking devices to image correction processed digital video signals (figure 2, paragraphs 0030-0032, 0035-0034), the remote management unit including modules for processing and transmitting control signals to and from the plurality of workstations (figure 2, paragraphs 0012, 0035-0040) and transmitting the image correction processed digital signals to the plurality of workstations (figure 2, paragraph 0030-0033, 0035-0046).

Comstock [discloses] a digitizer converting analog video signals to digital video signals. However, Comstock does not explicitly teach a controller. Schneider teaches a controller includes video digitizer that receives and converts analog signals into digital signals (figure 1, col. 5, line 49 – col. 6, line 38). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teachings of Schneider into Comstock system to include the controller because it would provide an efficient system for remotely accessing and controlling a remote located computer system using controller.

Similar reasoning was applied to Independent claim 27. Applicant requests reconsideration and removal of this rejection for at least the following reasons.

35 U.S.C. §103 forbids issuance of a patent when the differences between the subject matter sought to be patented and the prior art are such that the subject matter

as a whole would have been obvious to a person having ordinary skill in the art to which said subject matter pertains. *See, KSR Int'l. v. Teleflex*, 127 S.Ct. 1727, 1734 (2007). However, a patent claim is not proved obvious even by merely by showing that each of its several elements was, independently, in the prior art. *See, KSR Int'l Co. V. Teleflex Inc.*, 127 S. Ct. 1727 citing *United States v. Adams*, 86 S. Ct. 708. Rather, an explicit analysis of as to whether there was an apparent reason to combine the known elements in the fashion claimed needs to be made. *See, KSR Int'l Co. V. Teleflex Inc.*, 127 S. Ct. 1727 citing *In re. Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“*Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*”).

When determining whether an invention distinguishes over prior art references, each prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). A *prima facie* case of obviousness can be rebutted where the cited art teaches away from the claimed invention in any material respect. *See, In re Haruna*, 249 F.3d 1327, 58 USPQ2d 1517 (Fed. Cir. 2001). A reference teaches away when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that was taken by the applicant. *Id.*

The invention as claimed provides an improved video digitizer capable of rapidly adjusting the video signal when a user switches from one remote computer to another. *See, specification as filed, p. 19, ll. 14-19*. Such embodiments may also be capable of correcting many problems associated with video transmission in KVM switches, such as phase shift adjustments and video mode detection. *See, Id.* An LCD controller converts analog video signals received from a remote networking device to image correction processed digital video signals.

As noted by the examiner, Comstock does not explicitly teach a controller. More importantly, Comstock does not teach an LCD controller as specifically recited in claims 2 and 27. Nor is there any disclosure cited that would lead a person of ordinary skill to combine Comstock with another reference to reach the invention. In particular,

Comstock is directed to the field of multimedia conferencing and utilizes custom designed hardware and software to accomplish the desired video switching. Comstock does not deal with the typical problems found in a KVM environment. The Schneider reference adds nothing to the mix. The Schneider reference is directed to the KVM environment but also utilizes custom designed hardware and software to capture and compress video signals. Both references are consistent in the need for custom designed hardware and software to digitize video. In contrast, the invention utilizes an LCD controller in non-conventional manner to produce image correction processed digital video signals. Even, if one were to combine the teachings of Comstock and Schneider, this would not reach the invention as claimed in claim 2 and 27.

The present invention as claimed in Claims 2 and 27 replaces the typical A/D converter, and much of its associated circuitry used in conventional remote management systems with a Liquid Crystal Display ("LCD") controller. *See, e.g., specification as filed, p. 21, ll. 1-16.* An LCD controller is typically utilized when implementing a LCD monitor for use in a conventional computer system. The LCD controller provides video mode detection, auto-adjustment support and other functions that convert a video signal into a form that is compatible with a typical LCD display panel (i.e., such a controller would ordinarily incorporated into an LCD monitor). However, applicant has discovered that the internal functions built into the LCD controller may be applied to common KVM switch problems. *See, Id.* For example, some of these functions include video mode detection, auto-adjustment support for sampling phase and frequency, picture alignment, color alignment, color adjustment, upscaling/downscaling, and image position. *See, Id.* By utilizing an LCD controller, embodiments of the present invention provide a more efficient and simpler method for designing and implementing KVM switches. *See, Id.*

A review of both Comstock and Schneider reveals that neither of these references discloses the benefits of video signals processed via an LCD controller. Comstock is directed to the management of media in a multimedia conferencing system. This is not analogous to a KVM environment. The application as filed describes the KVM environment in detail. *See for example paragraphs 009-0012.* In more detail:

[0010] ... At the center of traditional circuits is a video speed A/D converter. Support circuitry surrounding this chip is complex, since the video digitizer needs to handle a variety of pixel clocks and phase shifts, and also needs to detect a blank video edge when switching between different computers or servers, which are the source of the signals...

[0012] Prior designs of digital KVM switches use a triple A/D converter and digital data processor, or triple A/D converter and software to do different adjustments. However, the adjustment time often takes a few seconds when operators switch from one computer to another. Also, many electronic parts are needed to implement these functions.

It is readily apparent that in the KVM environment, the remote computers can be set to a wide variety of video modes with varying display resolutions. The specific resolution of each remote computer is generally a function of which specific application(s) the remote computers are running. When switching from one remote computer to another, the KVM switch must compensate for these resolution changes as quickly as possible so that the operator is presented with a viewable image (i.e., an image of the remote computer video display). In contrast, the system in Comstock does not have any of these issues.

Comstock is completely silent as to the use of an LCD controller to convert analog video signals received from at least one of a plurality of remote networking devices to image correction processed digital video signals. Comstock simply discloses a video conferencing terminal (see Figure 1, reference number 100). The video conferencing terminal has:

... a content source switch 102, a content digitizer 104, a people source switch 106, and a people digitizer 108, which may operate collectively to handle media sources connected to the video conferencing terminal 100. See paragraph 0030

Comstock contains no specific discussion of any video signal processing done by the video conference terminal or the need for such processing. As noted above, the Schneider reference adds nothing to the mix. Schneider is directed to a method and system for intelligently controlling a remotely located computer. This is accomplished using a target controller:

Generally, a target controller 50 is a computer including at least one controller card. Each controller card is connected to one or more target devices (i.e., computer 20 or switch 74). Each controller card physically connects to at least one set of interfaces including: (1) a video interface 82, (2) a keyboard interface 84 and (3) a mouse interface 86. See Column 5, lines 29-35.

The "controller" disclosed in Schneider is not an LCD controller. Instead, Schneider performs a variety of video processing via custom designed hardware and software. The video processing techniques disclosed in Schneider are utilized to minimize bandwidth. There is no disclosure with respect to video processing to improve switching from one remote computer to another. For example Schneider discloses the use of GDI calls to redraw only blocks of video data that have changed (e.g., filtering and thresholding). See column 7, lines 38-50. Such filtering and thresholding can be accomplished via software (see column 7, line 63 - Column 9 line 51) or hardware (see column 9, line 53 - column 10, line 23). In the hardware implementation, comparitors 1000a and 1000a apply the desired threshold levels (0.1v and 1.5v respectively).

As such, Schneider does not generate image correction processed digital video signals. Instead, Schneider generates compressed video signals. Accordingly, Applicant requests reconsideration and removal of the rejection of Claims 2 and 27 as being unpatentable over the combination of Comstock and Schneider, at least by virtue that i) Comstock fails to teach, at least: a remote management unit coupled to said communications medium, said remote management unit including an LCD controller converting analog video signals received from at least one of a plurality of remote networking devices to image correction processed digital video signals and ii) Schneider does not generate image correction processed digital video signals let alone image correction processed digital video signals generated via an LCD controller.

Claims 3 and 5-26 each ultimately depend from base Claim 2. Claims 28-46 each ultimately depend from base Claim 27. Applicant thus also requests reconsideration and removal of the rejections of Claims 3, 5-26 and 28-46 as well, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claims 2 and 27.

2. Claim 4

As set forth above, Claim 4 stands rejected as being anticipated by Comstock. Applicant requests reconsideration and removal of this rejection for at least the following reasons.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *See, M.P.E.P. §2131 citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).* In other words, in order for a prior art reference

to anticipate a claim, “the identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). And, each of the claim elements must be arranged as required by the claim. *See, In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Comstock fails to teach each of the limitations of present Claim 2, such that it fails to anticipate Claim 2 as a matter of law.

Claim 4 has been rewritten in independent form. Accordingly, no new matter has been added by the amendment thereof. Claim 4 recites, *inter alia*, “wherein said remote management unit controls a power supply for each of said remote networking devices.” The Office action argues Comstock teaches that a RMU controls a power supply of the remote networking devices at pars. 0022-0024. However, a review of these paragraphs of Comstock clearly reveals there is no mention therein, what-so-ever, of any remote power control of network devices at all -- no less of an RMU controlling the power of remote networking devices.

Rather, paragraph 0022 merely discusses possible physical realizations. Paragraph 0023 discusses teleconference standards that can be utilized. And, paragraph 0024 discusses that a gateway translates data between PSTN 60 and Internet 80. As noted above, Comstock is directed to the management of media in a multimedia conferencing system. In such a system, remote power control of network devices is not a concern. The system is merely designed to provide video conferencing capabilities.

Accordingly, Applicant requests reconsideration and removal of the rejection of Claim 4 as well, at least by virtue that Comstock fails to teach, or even suggest for that matter, that the remote management unit controls a power supply for each of the remote networking devices.

3. Dependent Claims 16, 17

As set forth above, Claims 16 and 17 were rejected as being unpatentable over the combination Comstock and Schneider. Applicant requests reconsideration and removal of these rejections for at least the following reasons. As noted above, Claims 16 and 17 depend from claim 1 and are allowable with claim 1. Claims 16 and 17 also recite further aspects of the invention, and considering each of the claims as a whole, are patentable in their own right. Claims 16 and 17 both recite scaling functions that allow for resizing of

the video signal (e.g., downscaling in cases where the destination for the video can only accommodate a video source with a specific maximum resolution or upscaling in cases where magnification is desired). These aspects are simply not found in the Schneider reference.

4. *Dependent Claim 20*

As set forth above, Claim 20 was rejected as being unpatentable over the combination Comstock and Schneider. Applicant requests reconsideration and removal of these rejections for at least the following reasons. As noted above, Claim 20 depends from claim 1 and is allowable with claim 1. Claim 20 also recite further aspects of the invention, and considering each of the claims as a whole, are patentable in their own right. Claim 20 recites a dithering circuit for approximating a color for a pixel of said digital video signals. This process is described in detail in paragraph 00120. These aspects are simply not found in the Schneider reference.

CONCLUSION

Wherefore, Applicant believes he has addressed all outstanding grounds raised by the Examiner and respectfully submits the present case is in condition for allowance, early notification of which is earnestly solicited.

Should there be any questions or outstanding matters, the Examiner is cordially invited and requested to contact Applicant's undersigned attorney at his number listed below.

CORRESPONDENCE AND FEES

Applicant encloses the fees herewith for a three month extension of time (\$1050.00) and a request for continued examination (\$810.00). No additional fees are believed to be necessitated by the instant response. However, should this be in error, authorization is hereby given to charge Deposit Account no. 03-3839 for any underpayment, or to credit any overpayments.

Please address all correspondence to the correspondent address for **Customer No. 26345** of Intellectual Docket Administrator, Gibbons P.C., One Gateway Center, Newark, NJ 07102. Telephone calls should be made to Abhik A. Huq at (215) 446-6268 and fax communications should be sent directly to him at 215-446-6337.

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